ZEIT (F. Robt.)

Compliments of the writer.

Two Cases of Conservative Surgery.

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TWO CASES OF CONSERVATIVE SURGERY.

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AMPUTATION OF MIDDLE AND RING FINGERS, WITH EXCISION OF THEIR METACARPAL BONES AND THE OS MAGNUM.

We are generally warned against amputations through the carpus, as it is thought that, by partial removal of the carpal bones, the rest would be loosened and thrown off by suppuration; that here we should make an exception to the rule: "to save as much as possible of the limb." The great danger attendant on wounds of the palm has also been frequently pointed out.

Here is an exceptional case of extensive injury of the palm and carpus, to prove that the dangers of suppuration, erysipelas, pyemia, tetanus, and a useless wrist can be averted by antiseptic wound treatment. The conservative surgery practiced in this case would have been an impossibility without its use.

A. M——, age about 38 years; laborer in saw mill; in August, '91, while at work in the mill, fell with his left hand against a circular saw running at a comparatively slow rate. The middle and ring finger were torn off, the saw splintering both metacarpal bones, lacerating superficial and deep palmar arch of vessels, and splintering the os magnum; soft parts severely contused and lacerated. Arnica had been poured into the wound, and a dirty rag was employed for hemostatic purposes. The middle finger had disappeared between the machinery, and the ring finger hung by just a shred, so that light traction pulled it off.

The patient being anesthetised, an Esmarch bandage applied to arm, the hand and wound thoroughly cleansed and washed by sublimate solution, 1:2000, I made a "V" shaped incision on dorsum of the hand, its apex on the os magnum. The extensor tendons of index and little finger (extensor indicis, index tendon of extensor communis digitorum, and extensor minimi digiti) were pushed aside, and those of the middle and ring fingers (extensor communis digitorum) divided.

The splintered pieces of the metacarpal bones and the os magnum were then excised, after a somewhat shorter "V" shaped incision had been made into the palm, dividing the middle and ring finger tendons of the flexors (sublimis digitorum and profundus digitorum), the adductor pollicis, and interossei muscles, together with the superficial and deep palmar arch of vessels, being careful to preserve its internal digital and external branch of little finger. The median nerve was looked for and pushed aside before the deeper parts were divided.

During the operation the wound was frequently irrigated with 1:2000 sublimate solution. The branches of the superficial and deep palmar arch of vessels were ligated by catgut, even the smallest of them.

Two goodly sized rubber drains being inserted from palmar and dorsal side, the carpus and palm were brought together (the scaphoid and trapezoid with the semi-lunar and unciform, and the metacarpal bone of the index finger becoming the neighbor of that of the little finger) by catgut sutures, and the wound dressed with iodoform, protective, iodoform and sublimate gauze, and borated cotton. Small splints were then applied lightly on palmar and dorsal side.

No elevation of temperature followed. On ninth day the dressing was changed for the first time, and the drainage tubes removed. The wound healed by first intention; in four weeks he began to use passive motion; in six, active; in

three months, he had a somewhat narrow, but useful, hand (figures 1 and 2); he could handle heavy planks with it, and

Fig. 1.

Fig. 2.

began to display a rather alarming eagerness to prove the sensibility and strength of his operated hand, persecuting my assistant, Mr. Elvis, and tearing single hairs out of his beard, or taking him by the neck for "a good shake up" as he called it.

At this time, eight months after the operation, the hand has been continually growing in usefulness, and the carpal bones appear to have become thoroughly accustomed to their new arrangement without the os magnum (figures 3 and 4). The function and usefulness of the hand and carpus are almost as good as they were before the accident.

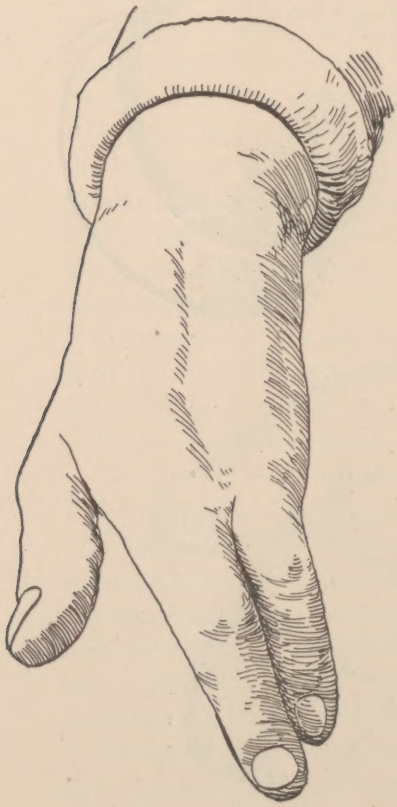

Fig. 3.

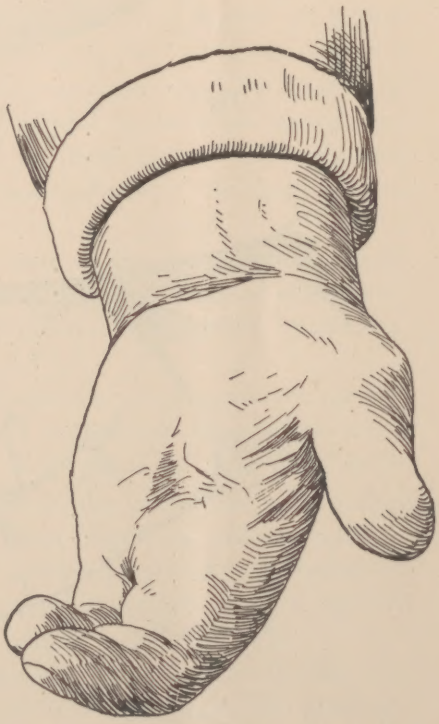

Fig. 4.

OSTEOTOMY OF TIBIA AND FIBULA FOR DEFORMITY, DUE TO UNREDUCED FRACTURE OF EIGHT MONTHS' STANDING.

This case is another instance of what antiseptic surgery will allow us to do, even if the probabilities of success are greatly diminished by advanced age, and failure of general health of the patient.

F. S——, age 56 years; a farmer; poor; of melancholic disposition; his general health run down by being confined to house and bed for eight months, and under the most unsanitary conditions. He had a fall from a wagon, and broke his left leg A quack was called who applied some bandages without reducing the fracture, and excused himself afterwards with the graphic statement that the leg had not become straight "because the whole foot had gone into pus." Seven months after the accident, the case was seen by a physician who advised amputation of the leg, but could not get the patient's consent to the operation. A month later I was called.

On examination it was found that the tibia had been broken about three inches above the internal malleolus, the fibula about an inch higher. A solid callus had united the tibia at an angle of 120 to 130 degrees; the upper fragment overlapping the lower so much, that the integument was tightly stretched over the angle formed at this point. The astragalus was normally located between the malleoli, with normal flexion and extension movements, no side motion being possible. He was unable to stand on this leg, and suffered excruciating pain at the site of the large callus formation, which caused him to submit to an operation (figs. 1 and 2).

The parts being shaved, cleansed, and washed by a 1:1000 sublimate solution, and the patient etherized, I first made a slight attempt at refracture (osteoclasis); which was unsuccessful. In view of the long standing of the case (eight months),

the proximity of the ankle joint, and the probability of producing a compound fracture, not much force was used.

I now applied an Esmarch bandage and made a vertical in-

Fig. 1.

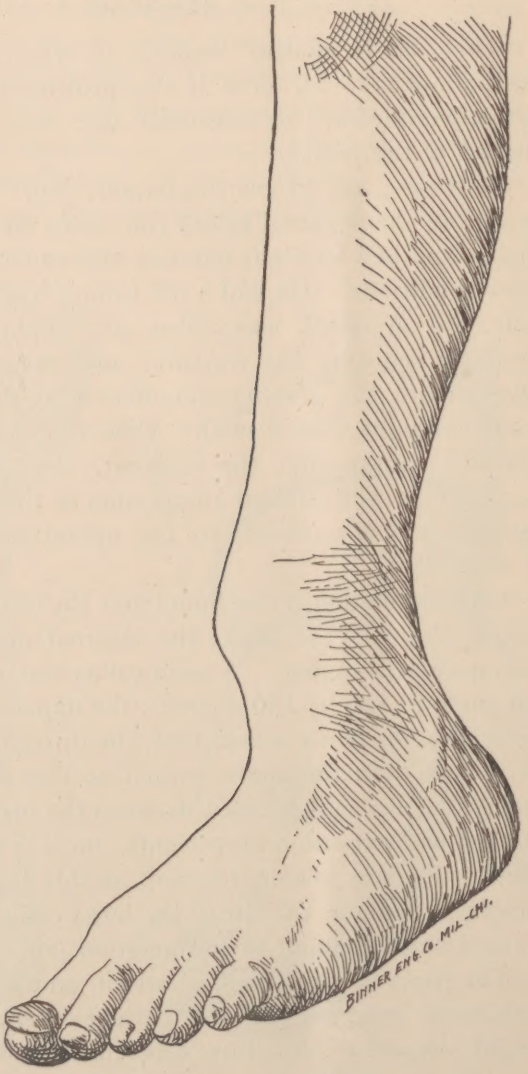

Fig. 2.

cision, four inches long, with the prominent angle of the tibia as its centre. At the point of overlapping, a large callus was found; a wedge shaped piece was chiseled away, its apex pointing towards the fibula. The callus, however, had to be chiseled entirely through to make the fragments somewhat movable and, even then, they could not be brought to a normal position on account of callus formation between the upper fragment of the tibia and the lower of the fibula. The wound was now irrigated with sublimate solution, 1:2000, and packed with sublimate gauze.

Fig. 3.

A vertical incision was then made along the course of the fibula, and the part exposed where the fracture had been. The fibula was chiseled through, and the callus between fibula and tibia excised sufficiently to allow of the ends of both bones being brought into apposition by extension.

The fragments of the tibia were then drilled and united by three silver wires; those of the fibula by one wire. After thorough irrigation, the Esmarch bandage was removed, the leg elevated, a rubber drainage tube inserted into the wound over the fibula, and another through a counter opening at posterior aspect of tibia to drain this wound. The wounds were then closed by catgut sutures and dressed with iodoform, protective, iodoform and sublimate gauze, and the whole leg enveloped in borated cotton. An anterior plaster of Paris splint was finally fastened to the leg by several circular

turns of plaster bandage, about three inches apart, the foot at a right angle with the leg, the knee slightly flexed, and the whole leg suspended in a sling from the ceiling.

On the evening of first day after the operation his temperature was 100 degrees F., his pulse 70; thereafter normal.

The dressings were removed on the eighteenth day after the operation. The wound over the fibula healed by first intention. On the tibial side, the wound had partially healed by granulation, and the drainage tube, pushed out, was found in the dressing. The other drainage tube was removed, the leg dressed as before, and a permanent plaster of Paris bandage applied.

About eight weeks after the operation, the patient walked around with a cane, without any pain or discomfort, for the first time since he broke his leg, ten months previously. The plaster bandage was then removed (fig. 3), and a Tiemann's weak-ankle brace substituted for it, to be worn for a few months.